

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Canceled) A method of increasing hematopoietic stem cell production in a subject comprising a step of administering a TPO mimetic compound to said subject.
2. (Original) A method of providing hematopoietic stem cells to a subject comprising the steps of:

administering a TPO mimetic compound to a subject to enhance expansion of a stem cell population within bone marrow and/or mobilize stem cells in peripheral circulation;

harvesting one or more of the bone marrow stem cells or the stem cells in the peripheral circulation; and

transplanting the harvested stem cells into the subject.

3. (Currently Amended) The method of ~~claims 1 and 2~~claim 2, wherein the subject is a human.
4. (Original) The method of claim 2, wherein the one or more stem cells are cryopreserved after harvesting.
5. (Original) The method of claim 4, wherein the one or more cryopreserved stem cells are thawed and determined to be viable prior to transplanting the stem cells into the subject.
6. (Original) The method of claim 4, wherein the one or more stem cells are transplanted into the subject when the subject is in need of such transplantation.
7. (Currently Amended) The method of ~~claims 1 and 2~~claim 2, wherein the TPO mimetic compound has reduced immunogenicity relative to one or more of rhTPO and rhIL-11.
8. (Currently Amended) The method of ~~claims 1 and 2~~claim 2, wherein the TPO mimetic compound has an improved PK profile relative to one or more of rhTPO and rhIL-11.
9. (Currently Amended) A method of reducing a time to engraftment following reinfusion of stem cells in a subject comprising the steps of:

administering a TPO mimetic compound to the subject;
enhancing the expansion of the stem cell population within bone marrow and/or mobilizing the stem cells in peripheral circulation; ~~and~~
harvesting one or more of the bone marrow stem cells or one or more of the stem cells in the peripheral circulation; and
transplanting the one or more harvested stem cells into the subject.

10. (Currently Amended) A method of reducing the incidence of delayed primary engraftment comprising the steps of:

administering a TPO mimetic compound to the subject;
enhancing the expansion of the stem cell population within bone marrow and/or mobilizing the stem cells in peripheral circulation; ~~and~~
harvesting one or more of the bone marrow stem cells or one or more of the stem cells in the peripheral circulation; and
transplanting the one or more harvested stem cells into the subject.

11. (Currently Amended) A method of reducing the incidence of secondary failure of platelet production comprising the steps of:

administering a TPO mimetic compound to the subject;
enhancing the expansion of the stem cell population within bone marrow and/or mobilizing the stem cells in peripheral circulation;
harvesting one or more of the bone marrow stem cells or one or more of the stem cells in the peripheral circulation; and
transplanting the one or more harvested stem cells into the subject.

12. (Currently Amended) A method of reducing the time of platelet and/or neutrophil engraftment following reinfusion of stem cells in a subject comprising the steps of:

administering a TPO mimetic compound to the subject;
enhancing the expansion of the stem cell population within bone marrow and/or mobilizing the stem cells in peripheral circulation; ~~and~~

harvesting one or more of the bone marrow stem cells or one or more of the stem cells in the peripheral circulation; and

transplanting the one or more harvested stem cells into the subject.

13. (New) The method of claim 2, wherein the TPO mimetic compound has the following sequence:

$$X_1 X_2 X_3 X_4 X_5 X_6 X_7 X_8 X_9 X_{11} X_{12} X_{13} X_{14} X_{10}$$

wherein X₁ is I; X₂ is E; X₃ is G; X₄ is P; X₅ is T; X₆ L; X₇ is R; X₈ is Q; X₉ is selected from the group consisting of W, 1-Nal and 2-Nal; X₁₀ is Sar; X₁₁ is L, X₁₂ is A; X₁₃ A; X₁₄ is R.

14. (New) The method of claim 13, wherein the TPO mimetic compound has the following sequence:

IEGPTLRQ (2-Nal) LAARX₁₀.

wherein (2-Nal) is β -(2-naphthyl)alanine and X₁₀ is as defined in claim 13.

15. (New) The method of claim 14, wherein said TPO mimetic compound is covalently attached to a hydrophilic polymer.

16. (New) The method of claim 15, wherein said hydrophilic polymer has an average molecular weight of between about 500 to about 40,000 daltons.

17. (New) The method of claim 16, wherein said hydrophilic polymer has an average molecular weight of between about 5,000 to about 20,000 daltons.

18. (New) The method of claim 17, wherein said hydrophilic polymer has an average molecular weight of about 20,000 daltons.

19. (New) The method of claim 15, wherein said polymer is polyethylene glycol.

20. (New) The method of claim 2, wherein the TPO mimetic compound has the following formula:

$$\begin{array}{c} \text{IEGPTLRQ (2-Nal) LAAR}-(\text{Sar}) \\ \quad \quad \quad \backslash \\ \quad \quad \quad \text{K(NH}_2\text{)} \\ \quad \quad \quad / \\ \text{IEGPTLRQ (2-Nal) LAAR}-(\text{Sar}) \end{array}$$

wherein (2-Nal) is β -(2-naphthyl)alanine and (Sar) is sarcosine.

21. (New) The method of claim 20, wherein said TPO mimetic compound is covalently attached to a hydrophilic polymer.
22. (New) The method of claim 21, wherein said hydrophilic polymer has an average molecular weight of between about 500 to about 40,000 daltons.
23. (New) The method of claim 22, wherein said hydrophilic polymer has an average molecular weight of between about 5,000 to about 20,000 daltons.
24. (New) The method of claim 23, wherein said hydrophilic polymer has an average molecular weight of about 20,000 daltons.
25. (New) The method of claim 21, wherein said polymer is polyethylene glycol.
26. (New) The method of claim 20, wherein each of the dimeric subunits of said TPO mimetic compound is covalently attached to a hydrophilic polymer.
27. (New) The method of claim 26, wherein said hydrophilic polymer has an average molecular weight of between about 500 to about 40,000 daltons.
28. (New) The method of claim 27, wherein said hydrophilic polymer has an average molecular weight of between about 5,000 to about 20,000 daltons.
29. (New) The method of claim 28, wherein said hydrophilic polymer has an average molecular weight of about 20,000 daltons.
30. (New) The method of claim 26, wherein said polymer is polyethylene glycol.